

**Figure 1**

## A. Rig open reading frame nucleotide sequence

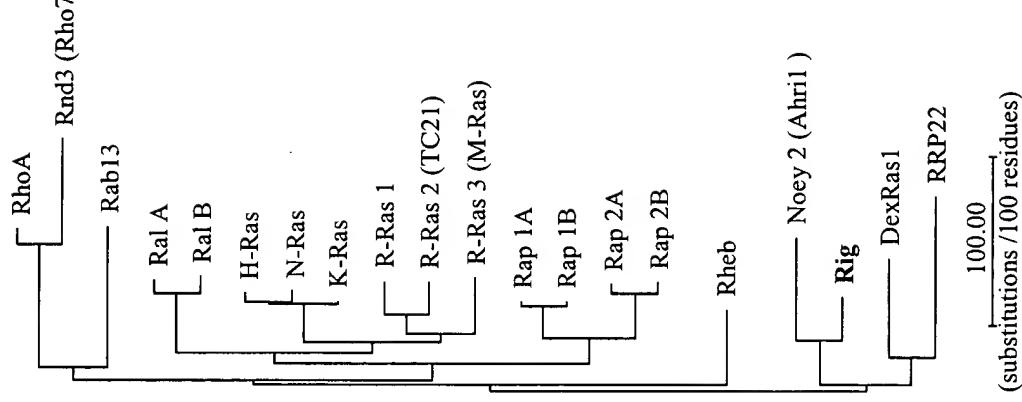
## B. Rig amino acid sequence

MPEQSNNDYRVVVFAGGVGKSSL VLRFVKGTFRDTYIPTIEDTYRQVISCD  
KSVCTLQITDTGSHQFPAMQRLSISKGHAFILEVSVTSKQSLEELGPIYKLIV  
QIKGSVEDIPVML VGNKCDETQREVDTREAQAVAQEWKCAFMEETSAKMN  
YNVKELFQELLTLETRRNMSLNIDGKRSGKQKRTDRVKGKCTLMM

## Figure 2

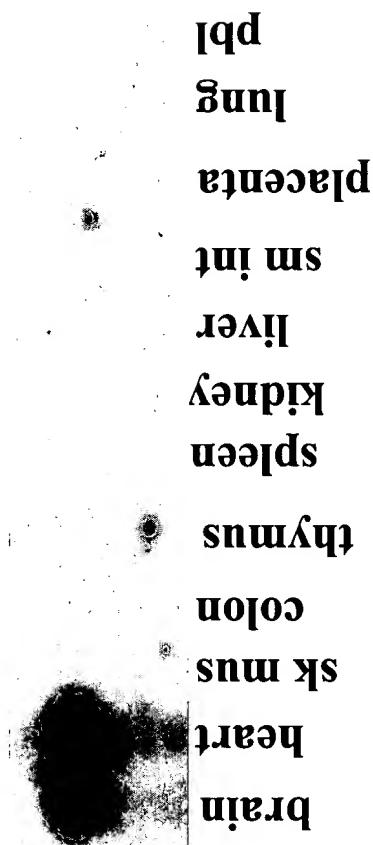
<b>Rig</b>	mpeqsndyrvvvf-----	13
Noey2	mgnasfgskeqkllkrllrpallilrafkphrkirdyrvvvv-----	43
RalA	maankpkqgqnsalalhkvimv-----	20
Rap1A	mreyklvvl-----	9
Rap2A	mreykvvvl-----	9
HRas	mteyklvvv-----	9
RRas	mssgaasgtgrgrprrgggpgpgdpppsethklvvv-----	35
Rheb	mpqsksrkiai-----	12
<b>Rig</b>	GAGGVGKSSLvlrfvkgtfrdtYIPTIEDTYrqviscdksvctl	57
Noey2	GTAGVGKSTl1hkwasgnfrheYLPTIENTYcql1gcshgvls1	87
RalA	GSGGVGKSAltlqfmymdefvedYEPPTKADSYrkvvldgeevqi	64
Rap1A	GSGGVGKSAltvqfvqgifyvekyDPTIEDSYrkqvvdccqcm1	53
Rap2A	GSGGVGKSAltvqfvtgtfielyDPTIEDFYrkieievdspsvl	53
HRas	GAGGVGKSAltiqqliqnbfvdeYDPTIEDSYrkqvvidgetcl1	53
RRas	GGGGVGKSAltiqfiqsyfvsdyDPTIEDSYtkicsvdgiparl	79
Rheb	GYRSVKGSSLtiqfvqfvdSYDPTIENTFtklitvngqeyhl	56
<b>Rig</b>	qitDTTGSHQfpamqrllsiskghafilvfsvtskqsllelgpiy	101
Noey2	hitDSKSGDGNralgrhviarghafvlysvtkketleelkafy	131
RalA	dildTAGQEDyaairdnysfrsgegflcvfsitemesfaatadfr	108
Rap1A	eildTAGTEQftamrdlymkngqgffalvysitaqstfnndlqd1r	97
Rap2A	eildTAGTEQfasmrdlyikngqgffilvyslvnnqsfqdikpmr	97
HRas	dildTAGQEEysamrdqymrtgegflcvfainntksfedihqyr	97
RRas	dildTAGQEEfgamreqymraghgfllvfaindrqsfnevqklf	123
Rheb	qlvDTAGQDEysifpqtysidingyilvysvtsiksfevikvih	100
<b>Rig</b>	klivqikgsvedipvmlvg-----NKCDetqrevdtreaqav	138
Noey2	elickikgnnlhkfipivlvg-----NKSDDthrevalndgatc	169
RalA	eqilrvkedenvpf1lvg-----NKSDledkrqvsveeakn	144
Rap1A	eqilrvkdtedvpmlvg-----NKCDledervvgkeqqn	133
Rap2A	dqiirvkyekvpvlvg-----NKVDleserevsssegra	133
HRas	eqikrvkdssdpvmvlvg-----NKCDlaartvesrqaqdl	133
RRas	tqilrvkdrddfpvvlvg-----NKADlesqrqvpurseasa	159
Rheb	gklldmvgkvqipimlvg-----NKKDLhmervisyeegka	136
<b>Rig</b>	aqewkcaf---ETSAkmnynvkelffqelltletrrnmslnidg	179
Noey2	amewncaf---EISAktdvnvgelfhmllnykkpttgqepe	210
RalA	raeqwnvnyv---ETSAktranvdkvffdmlreirarkmedskek	186
Rap1A	larqwcnc afl---ESSAkskinvnneifydlvrqinrktpekkp	176
Rap2A	laeewgcpfm---ETSAksktmvdefaeivrqnnyaacqdkddp	175
HRas	arsygipyi---ETSAktrqgvedafyt1vreibqhk1rknpp	174
RRas	fgashhvayf---EASAk1rlnvdeafeqlvravrkyqeqelpps	201
Rheb	laeswnaafl---ESSAkengtavdvfrriileaekmdgaasqgk	178
<b>Rig</b>	krsgkqkrtdrvkgk-----//----CTLM	198
Noey2	kksqmpntteklldk-----//----CIIM	229
RalA	ngkkkrkslakrirer-----//----CCIL	206
Rap1A	kkks-----//----CLLL	184
Rap2A	ccsa-----//----CNIQ	183
HRas	desgpgcmsck-----//----CVLS	189
RRas	ppsaprkkgggcp-----//----CVLL	218
Rheb	ss-----//----CSVM	184

# Figure 3



**Figure 4**

(A)



(B)

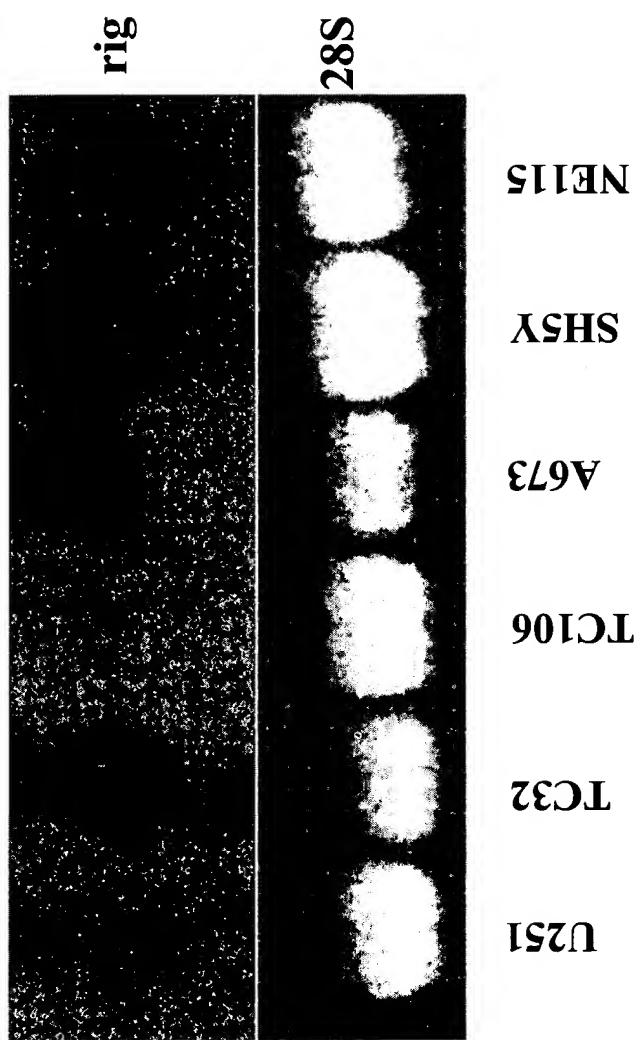


(C)

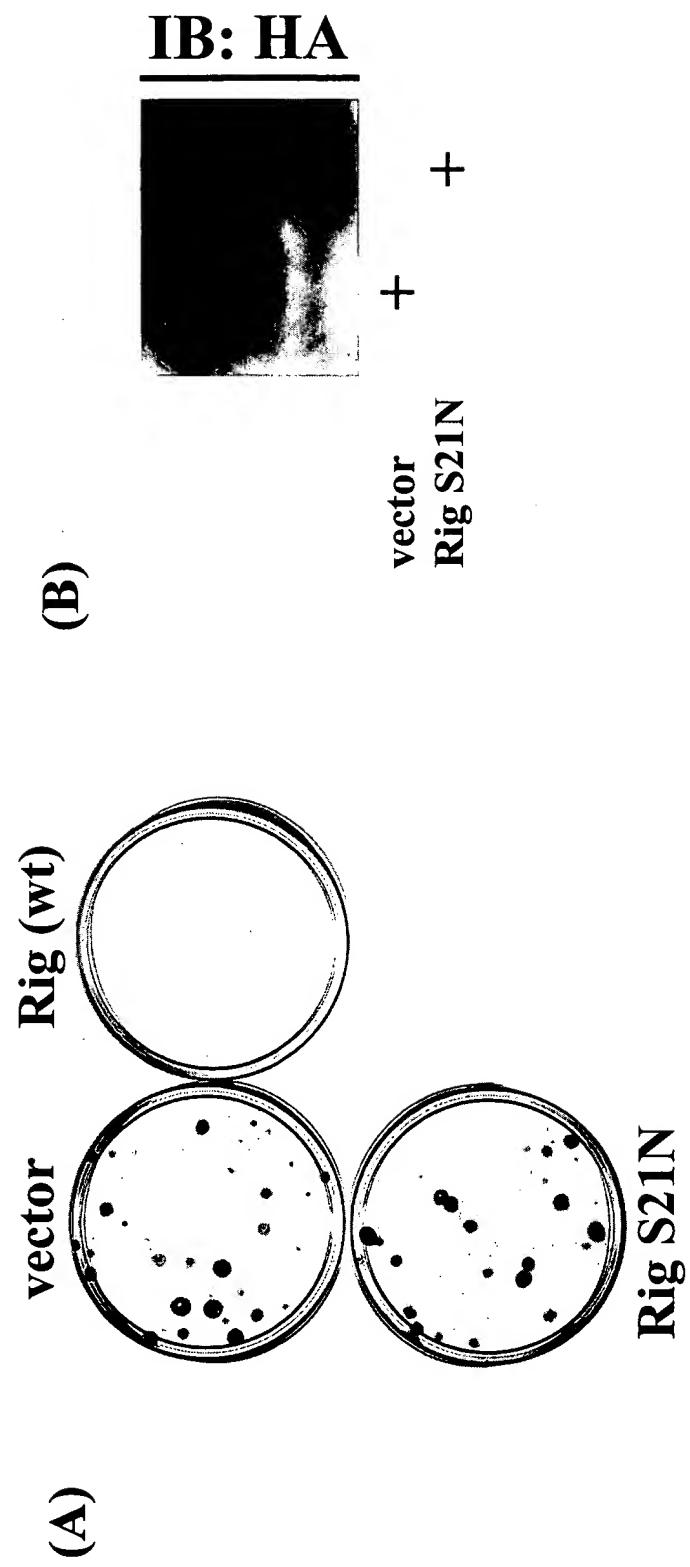
	1	2	3	4	5	6	7	8	9	10	11	12
A	whole brain	cerebellum, left	substantia nigra	heart	esophagus	colon, transverse	kidney	tung	liver	leukemia, HL-60	fetal brain	yeast total RNA
B	cerebral cortex	cerebellum, right	nucleus accumbens	aorta	stomach	skeletal muscle	placenta	pancreas	Hela	S3	total heart	yeast tRNA
C	frontal lobe	corpus callosum	thalamus	atrium, left	duodenum	rectum	bladder	adrenal gland	leukemia, K-562	fetal kidney	E. coli rRNA	
D	peripheral amygdala	pituitary gland	atrium, right	jejunum		thymus	uterus	thyroid gland	leukemia, MOLT-4	fetal liver	E. coli DNA	
E	occipital lobe	caudate nucleus	spinal cord	ventricle, left	ileum	peripheral blood leukocyte	prostate	salivary gland	Burkitt's lymphoma, Raji	fetal spleen	poly (A)	
F	temporal lobe	hippocampus		ventricle, right	ileocecum	lymph node	testis	mammary gland	Burkitt's lymphoma, Daudi	fetal thymus	human C <sub>0</sub> -1 DNA	
G	p.g. of cerebral cortex	medulla oblongata		inter-ventricular septum	appendix		ovary					
H	pons	putamen		apex of the heart	colon, ascending		bone marrow					
							trachea					

\* paracentral gyrus

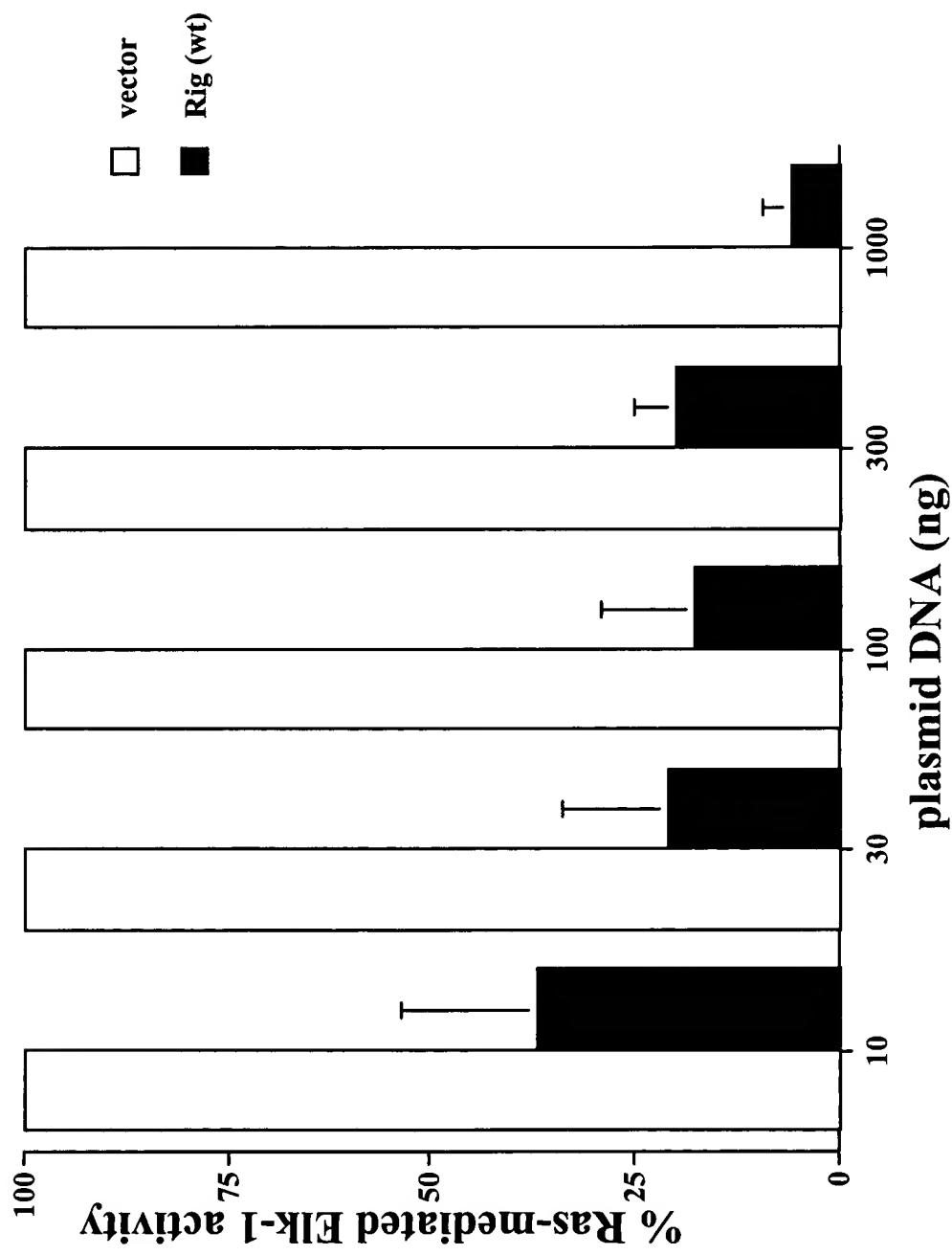
**Figure 5**



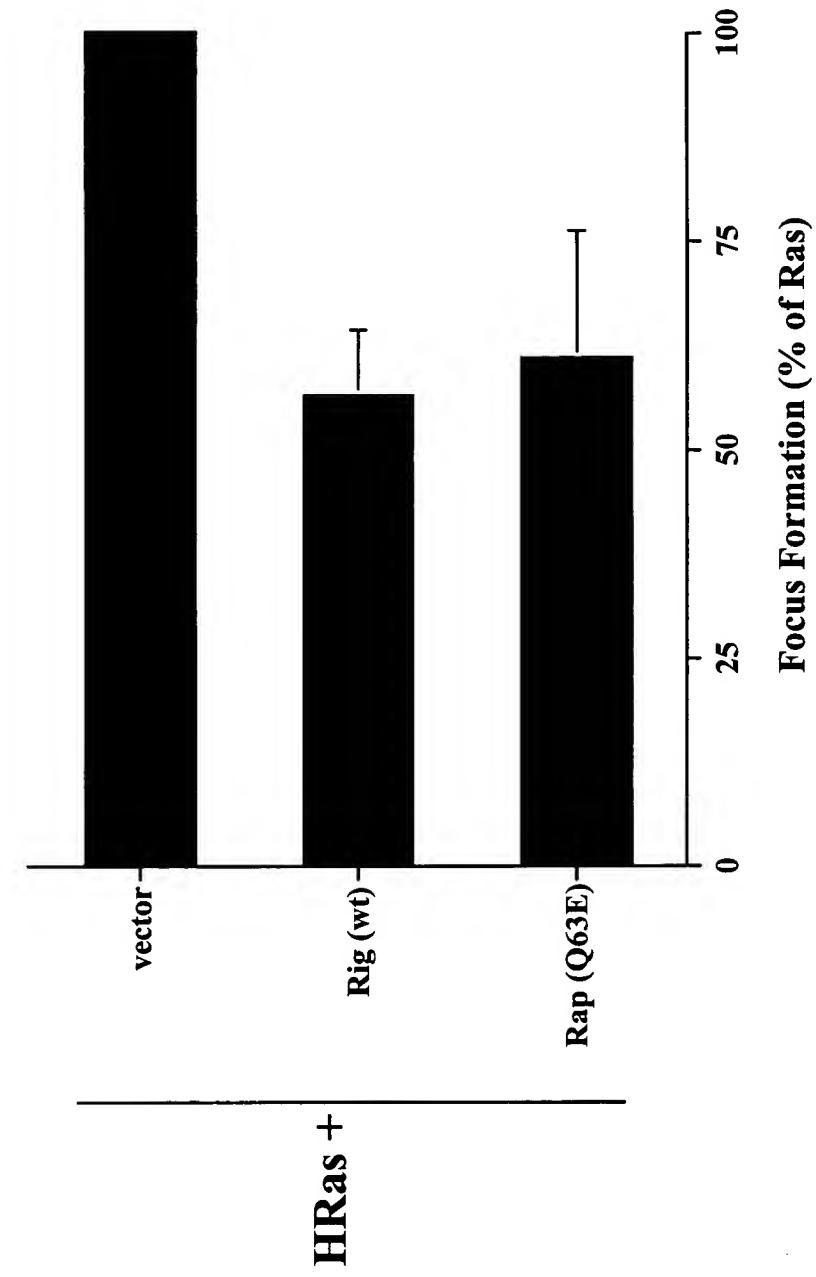
**Figure 6**



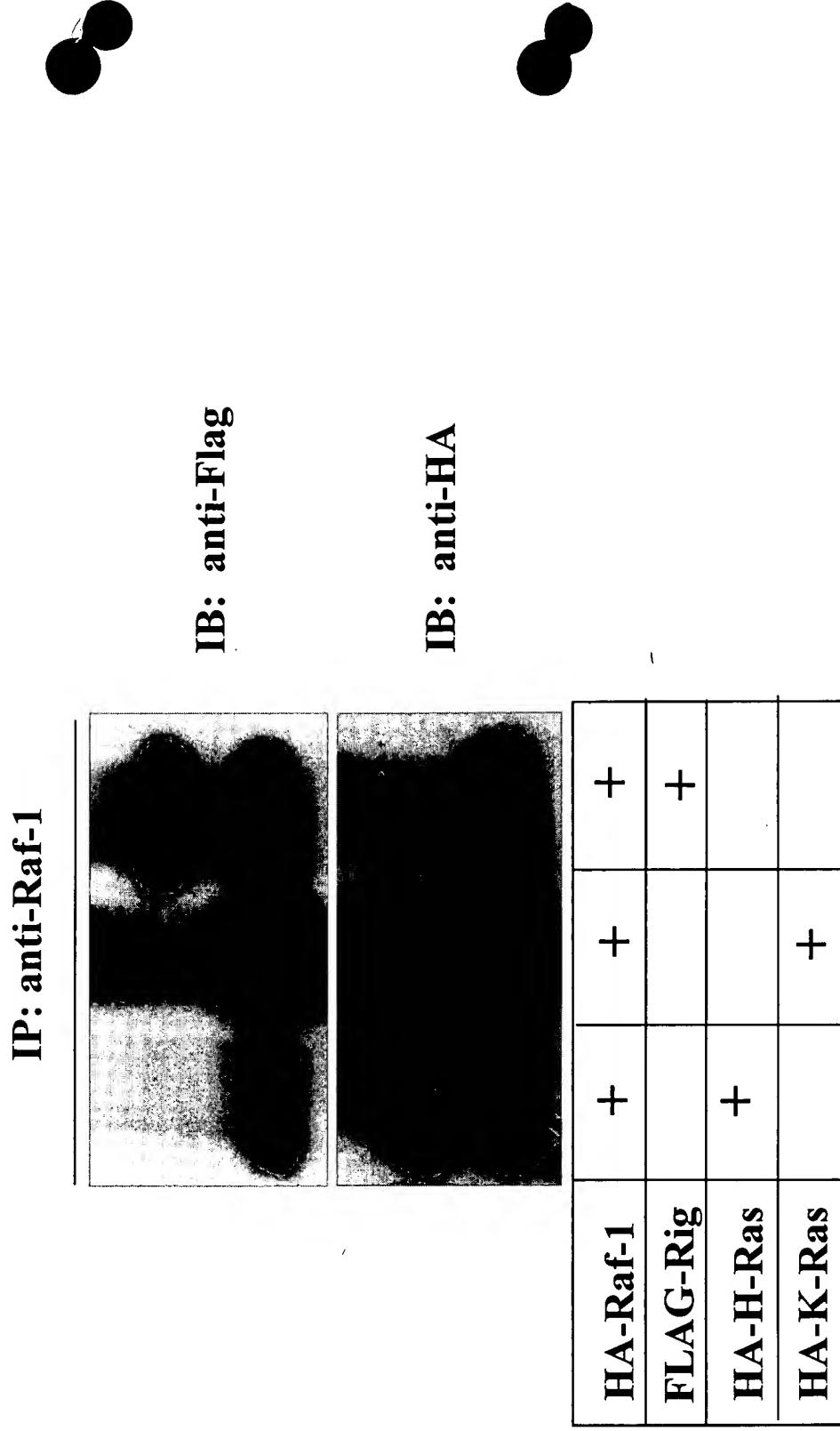
**Figure 7**



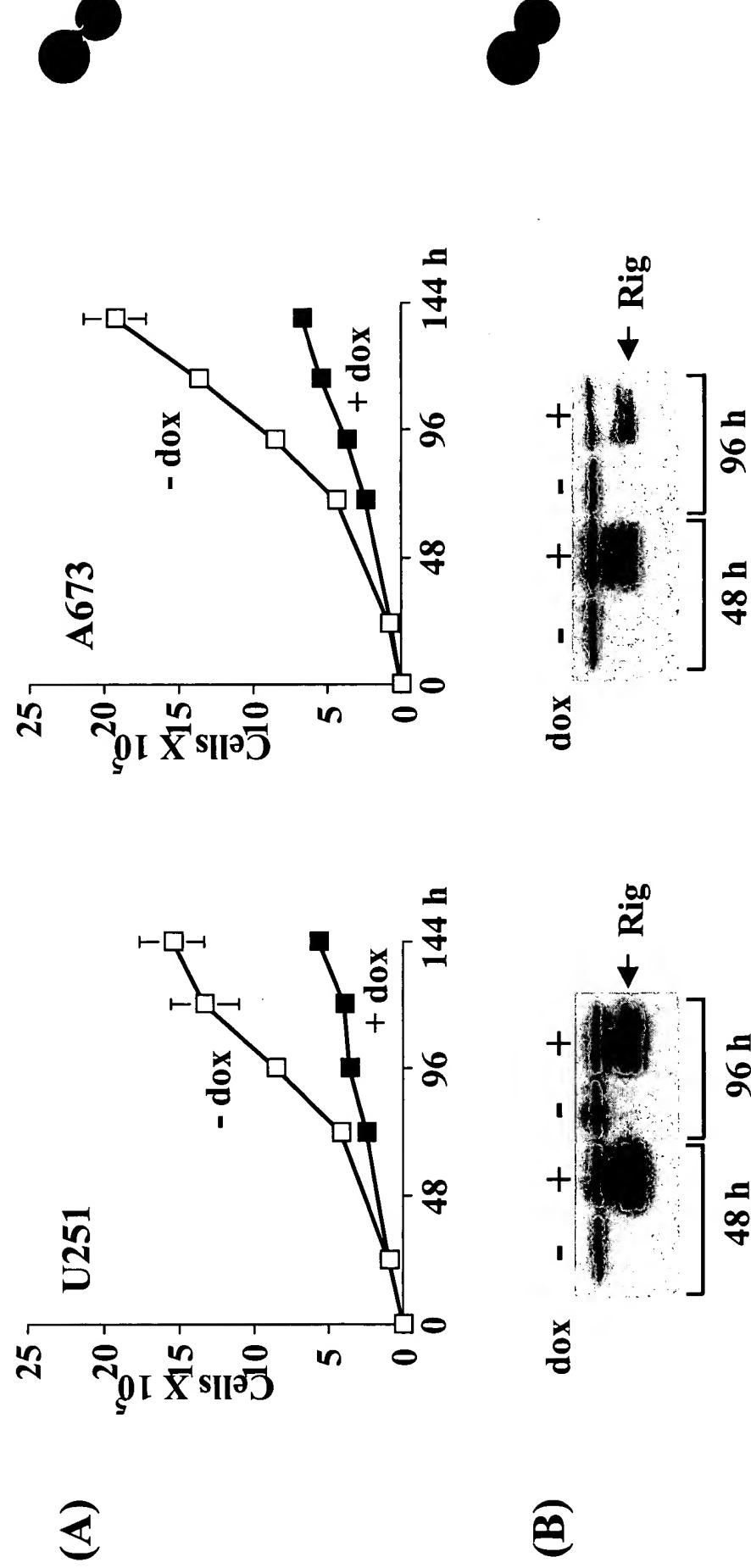
**Figure 8**



**Figure 9**



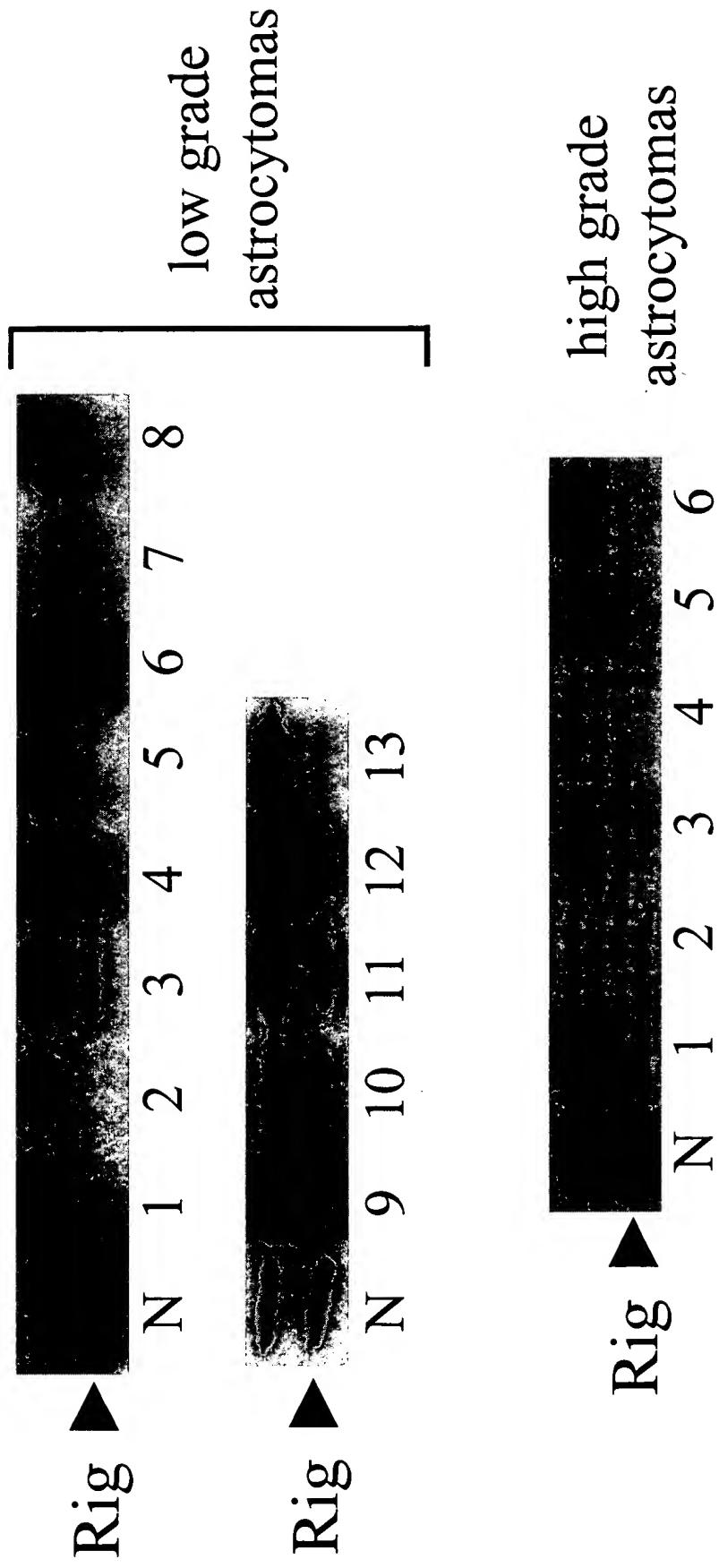
**Figure 10**



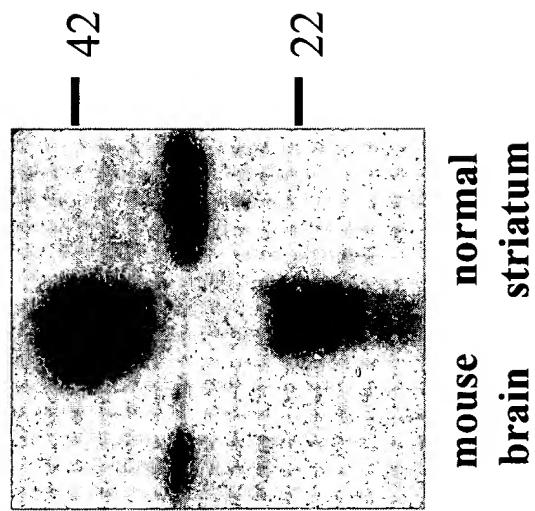
**Figure 11**



**Figure 12**

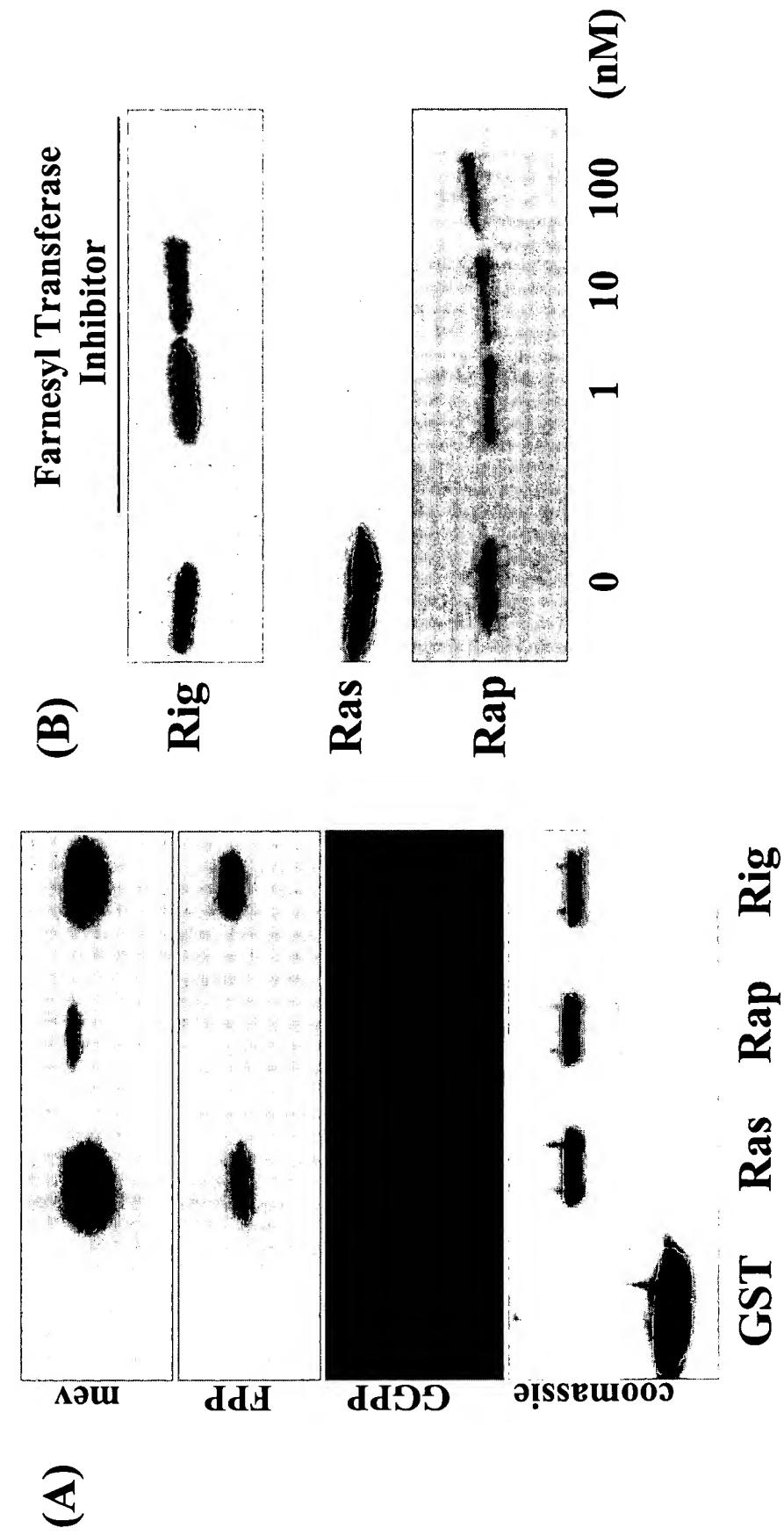


**Figure 13**



Rig

**Figure 14**



**Figure 15**

